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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,622	07/03/2001	John G. Apostolopoulos	10012162-1	5149

7590 05/27/2005
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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Fort Collins, CO 80527-2400

EXAMINER

HOSSAIN, TANIM M

ART UNIT	PAPER NUMBER
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2145

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,622

Applicant(s)

APOSTOLOPOULOS, JOHN

Examiner

Tanim Hossain

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 9, 11-15, 18, 20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monteiro (U.S. 5,983,005) in view of Hodge (U.S. 2002/0007494).

As per claim 1, Monteiro teaches a method for streaming media data to a client, said method comprising: streaming to a client multiple bitstreams (column 4, lines 29-42; column 4, line 61 – column 5, line 8); and distributing bitstreams to a plurality of servers placed at intermediate nodes throughout a network, such that said client is provided with access to said media data via a plurality of transmission paths (figure 1; where the media servers constitute the plurality of servers at intermediate nodes; column 2, lines 21-23; column 4, lines 6-11). Monteiro suggests the existence of different nodes handling different bitstreams to combine and distribute them to the end-user (column 6, lines 1-60), but does not specifically teach the encoding of an item of media data, where the two encoded bitstreams are decodable independent of one another. Hodge teaches the encoding of Ethernet data frames into bitstreams, which are decodable independent of one another (paragraphs 0022, 0027). It would have been obvious to one of ordinary skill in the art at the time the invention to include the encoding of a data frame

into multiple bitstreams to combine them when presenting them to the end-user as taught by Hodge in the system of Monteiro. The motivation for doing so, in addition to Monteiro's suggestion, lies in the fact that having multiple sources of information prevents the existence of a single point of failure, lending itself to higher system integrity. In addition, peer-to-peer file transfer applications also widely employ the teaching of encoding the file and packetizing them, such that different packets may be received from different peers and are then reconstructed and decoded to form the complete data file, which constitutes the same principle claimed.

As per claim 2, Monteiro-Hodge teaches the method for streaming media data to a client as recited in claim 1, wherein said encoding further comprises: encoding said item of media data into a first and second complementary multiple description bitstream wherein each of said first and second complementary multiple description bitstreams contains complementary information (Hodge: paragraph 0027; where the different frequencies contain complementary information).

As per claim 3, Monteiro-Hodge teaches the method for streaming media data to a client as recited in step a) of claim 1, wherein said item of media data is encoded into a first and a second complementary multiple description bitstream wherein each of said first and second complementary multiple description bitstreams is of substantially equal importance during decoding (Hodge: paragraphs 0027, 0036).

As per claim 4, Monteiro-Hodge teaches the method for streaming media data to a client as recited in claim 1, wherein said encoding further comprises: encoding said item of media data into a first and a second complementary multiple description bitstream wherein each of said first and second complementary multiple description bitstreams does not include encoded media data

that is included in the other of said first and second complementary multiple description bitstreams (Hodge: 0027).

As per claim 5, Monteiro-Hodge teaches the method for streaming media data to a client as recited in claim 1, wherein said item of media data is selected from the group consisting of audio-based data, speech-based data, image-based data, graphic-data, and web page-based data (Monteiro: Abstract; column 2, lines 11-20; Hodge: 0010).

As per claim 6, Monteiro-Hodge teaches the method for streaming media data to a client as recited in claim 1, wherein said distributing further comprises: distributing said first multiple description bitstream to a first server and distributing said second multiple description bitstream to a second server (Monteiro: column 2, lines 21-30; figure 1 and 3 also show this capability; Hodge: figure 3, 0027).

As per claim 9, Monteiro-Hodge teaches the method for streaming media data to a client as recited in claim 1, wherein said method does not require complete duplication of said media data in order to achieve path diversity (column 4, lines 29-42, column 7, lines 36-63).

As per claim 11, Monteiro-Hodge teaches a method for achieving reliability and efficiency and for reducing single points of failure in the streaming of media data to a client, said method comprising the steps of:

a) encoding an item comprising said media data to be streamed to said client into a first complementary multiple description bitstream and into a second complementary multiple description bitstream, each of said first and second complementary multiple description bitstreams containing complementary information not included in the other of said first and second complementary multiple description bitstreams, and wherein each of said first and second

complementary multiple description bitstreams is useful to said client independent of the other of said first and second complementary multiple description bitstreams; (Monteiro: column 4, line 66 – column 5, line 22; where the decoder implies encoding; column 7, lines 36-63; Hodge: 0027); and

b) distributing said first complementary multiple description bitstream and said second complementary multiple description bitstream to a plurality of servers placed at intermediate nodes throughout a network, such that said client is provided with access to said media data via a plurality of transmission paths (Monteiro: figure 1; where the media servers constitute the plurality of servers at intermediate nodes; column 2, lines 21-23; column 4, lines 6-11; Hodge: 0027).

Claims 12-15, and 18 are rejected on the same bases as claims 3-6, and 9 respectively, as claims 12-15, and 18 teach a method of implementing claims 3-6, and 9 respectively.

As per claim 20, Monteiro-Hodge teaches a system for streaming media data to a client, said system comprising: a first server having memory coupled thereto, said first server adapted to be coupled to a network, said memory coupled to said first server having a first multiple description bitstream of encoded said media data stored thereon, said first server adapted to transmit said first multiple description bitstream of encoded said media data to a client via a first path (Monteiro: column 4, lines 29-42; column 4, line 61 – column 5, line 8; figures 1 and 3; Hodge: 0027); and a second server having memory coupled thereto, said second server adapted to be coupled to said network, said memory coupled to said second server having a second multiple description bitstream of encoded said media data stored thereon, said second server adapted to transmit said second multiple description bitstream of encoded said media data to said

client via a second path, wherein said first multiple description bitstream and said second multiple description bitstream are decodable independent of one another (column 4, lines 29-42; column 4, line 61 – column 5, line 8; figures 1 and 3; where the existence of memory is inherent; Hodge: 0027).

As per claim 21, Monteiro-Hodge teaches the system for streaming media data to a client of claim 20 further comprising: a content server coupled to said first server and said second server, said content server adapted to provide said first multiple description bitstream of encoded said media data to said memory coupled to said first server, said content server further adapted to provide said second multiple description bitstream of encoded said media data to said memory coupled to said second server (column 4, line 66 – column 5, line 22, column 7, lines 36-63; column 2, lines 21-30; figures 1 and 3; where with the existence of a server, the existence of memory is inherent; Hodge: 0027).

Claim 22 is rejected on the same basis as claim 5, as claim 22 is a system for implementing the method of claim 5.

Claims 7, 8, 10, 16, 17, 19, and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monteiro-Hodge in view of Gershman (U.S. 6,401,085).

As per claim 7, Monteiro-Hodge teaches the method for streaming media data to a client as recited in claim 1, but does not specifically teach that the receiving client is a mobile client. Gershman teaches the limitation that the receiving client is a mobile client (column 3, lines 14-28). It would have been obvious to one of ordinary skill in the art at the time of the invention to include this limitation, as taught by Gershman in the system of Monteiro-Hodge, as they are both

from the same field of endeavor, namely the efficient reception of services over the Internet. The existence of Internet capability on mobile devices is well known in the art, and its specific inclusion into Monteiro's invention allows for further diversity and efficiency.

As per claim 8, Monteiro-Hodge-Gershman teaches the method for streaming media data to a client as recited in claim 7, wherein the step comprises: distributing said first and second multiple description bitstreams to servers placed along a wired/wireless gateway (Gershman: column 3, lines 14-28; where the existence of wireless communication constitutes the existence of a wireless gateway system, and Monteiro teaches the wired gateway system (figures 1 and 3). Motivations to combine teachings are discussed in the treatment of claim 7, and further, the extension to wired Internet communication to wireless Internet communication is obvious and well known in the art.

As per claim 10, Monteiro-Hodge-Gershman teaches the method for streaming media data to a client as recited in claim 1, wherein said method is performed in a network system selected from the group consisting of: wired and wired networks; wired and wireless networks; wireless and wired networks; and wireless and wireless networks. The existence of a fully wired network, as taught by Monteiro-Hodge, and the capability of a fully wireless network as taught by Monteiro-Hodge-Gershman, or any combination thereof, allows for the capability for there to exist any combination of wired and wireless interfaces. The different combinations constitute design choices and the teaching thus obvious to one of ordinary skill in the art at the time of the invention.

Claims 16, 17 and 19 are rejected on the same bases as claims 7, 8 and 10 respectively, as claims 16, 17 and 19 teach a method of implementing claims 7, 8 and 10 respectively.

Claims 23 and 26 are rejected on the same bases as claims 7 and 10 respectively, as claims 23 and 26 teach a system for implementing the contents of claims 7 and 10 respectively.

Claims 24 and 25 are rejected on the same basis as claim 8, as claims 24 and 25 constitute a system for implementing the contents of claim 8.

Response to Arguments

Applicant's arguments filed on January 24, 2005 have fully been considered and a new ground of rejection has been formed to traverse the amendments. Therefore, the arguments are now rendered moot.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanim Hossain whose telephone number is 571/272-3881. The examiner can normally be reached on 8:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on 571/272-6159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tanim Hossain
Patent Examiner
Art Unit 2145


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SUPERVISORY PATENT EXAMINER